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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,548	09/24/2003	Cornelius P. Dungan	AS-5643-2	4650
26294	7590	09/22/2004	EXAMINER	
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 526 SUPERIOR AVENUE, SUITE 1111 CLEVEVLAND, OH 44114			TRIEU, VAN THANH	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/669,548

**Applicant(s)**

DUNGAN, CORNELIUS P.

**Examiner**

Van T Trieu

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/24/03 &amp; 3/22/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because of the phrase “discloses” in line 1.

Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: in the specification, the subsection “Related Application”, page 1, line 7, after the year “2001”, insert ---, now U.S. Patent No. 6,670,887. ---.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-17, 19-23, 25-33 and 35-52 are rejected under 35 U.S.C. 102(b) as being anticipated by **Huston et al** [US 5,872,721].

Regarding claim 1, the claimed apparatus for use in monitoring for a selected gas from a potential source of the selected gas, the apparatus comprising a housing (the security container 60 or 260, see Figs. 15-17 and 55, col. 28, lines 65 and col. 32, lines 30-39);

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and the control apparatus disposed within the housing (the monitor control system 100 or 300, see Figs 15-17 and 55, col. 28, lines 64-65, col. 29, lines 48-58 and col. 32, lines 35-39); and the data entry apparatus mounted on the housing and connected with the control apparatus, the data entry apparatus being operable to enter data which is transmitted from the data entry apparatus to the control apparatus (the control system 100 or 300 or remote communication system RCS includes a keyboard, keypad or user-interface for selectively inputting of set-points and dead-bands values for both oxygen concentration, carbon dioxide concentration and other gas concentration and/or calibrations, see Figs. 15 and 66A, col. 3, lines 8-26, col. 6, lines 41-53, col. 17, lines 53-65, col. 18, lines 17-23 and col. 22, lines 21-39); and the display mounted on the housing and connected with the control apparatus, the display being operable to display indicia, which is a function of data entered at the data entry apparatus (the front panel 306 includes LEDs 311-315 for displaying input data information and the status of selected oxygen, carbon-dioxide and/or other gases to be viewed, see Fig. 56, col. 5, lines 1-12, col. 13, lines 20-27, col. 32, lines 66-67 and col. 33, lines 1-2); and the sensor connected with the control apparatus, the sensor being operable to sense atmosphere adjacent to the housing and to provide an output which is conducted to the control apparatus, said output from the sensor is a function of a sensed concentration of the selected gas in the atmosphere adjacent to the housing (the sensor board 133 or 324 includes oxygen sensor 130 or 325 and carbon-dioxide sensor 131,160 or 326 and other gas sensor 161, connected to a microprocessor board 129 or 328 for comparing and determining the status of each selected gas concentration conditions, see Figs. 24,

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33-35, 60A and 60B, col. 2, lines 43-60, col. 30, lines 4-15, col. 31, lines 16-19 and col. 33, lines 43-60); and the radio disposed in the housing and connected with the control apparatus, the radio being operable to transmit data to a data receiving station which is spaced from the housing, the data transmitted by the radio to the data receiving station is a function of a concentration of the selected gas sensed by the sensor (the IR, electronic or other desired kinds of signals are adapted to provide two-way communications between the security container 60, 300 and the remote communication system RCS for alarming and displaying of input/output data information and the results from the microprocessor to indicate the selected gas concentration status, sensor conditions, power condition, commands, updating data and other related information, see col. 21, lines 34-67, col. 22, lines 1-67 and col. 23, lines 1-57).

Regarding claim 2, all the claimed subject matters are cited in respect to claim 1 above, and including the predetermined length of time having elapsed since a previous operation of the radio transmit data to the receiving station, see col. 4, lines 3-56, col. 5, lines 26-30, col. 6, lines 41-53 and col. 7, lines 38-41.

Regarding claim 3, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 4, all the claimed subject matters are cited in respect to claim 1 above, and including the data entry to enter data which relates to a period of time over which

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the magnitude of the sensed concentration of the selected gas is to be averaged (the detected data is then averaged over a desired time interval, see col. 5, lines 26-33).

Regarding claim 5, all the claimed subject matters are cited in respect to claims 1 and 4 above.

Regarding claim 6, all the claimed subject matters are cited in respect to claim 1 above, and including the averaging the magnitude of the concentration of the selected gas sensed by the sensor over a period of time of thirty second or less (the time interval is one minute, see col. 5, lines 26-33).

Regarding claim 7, all the claimed subject matters are cited in respect to claim 1 above, and including the plurality of manually actuation switches (the ON/OFF switch and the manually potentiometer for zero adjustment, see col. 7, lines 42-49 and col. 16, lines 9-32).

Regarding claim 8, all the claimed subject matters are cited in respect to claims 1 and 7 above.

Regarding claim 9, all the claimed subject matters are cited in respect to claim 1 above.

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Regarding claim 10, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 11, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 12, all the claimed subject matters are cited in respect to claim 11 above.

Regarding claim 13, all the claimed subject matters are cited in respect to claims 1, 2 and 4 above, and including the data storage (RAM, ROM PROM 403 and EEPROM, see col. 4, lines 26-56, col. 7, lines 12-23, col. 15, lines 58-662 and col. 16, lines 57-65).

Regarding claim 14, all the claimed subject matters are cited in respect to claims 1, 3 and 13 above.

Regarding claim 15, all the claimed subject matters are cited in respect to claims 1, 2 and 4 above.

Regarding claim 16, all the claimed subject matters are cited in respect to claim 1 above, and including the predetermined voltage (the voltage reference for the sensors, see col. 14, lines 45-51 and col. 15, lines 22-62).

Regarding claim 17, all the claimed subject matters are cited in respect to claims 1, 2 and 4 above and including the battery and the transformer, see Figs. 41A and 41B, col. 4, lines 26-62, col. 7, lines 58-660 and col. 9, lines 58-64.

Regarding claim 19, all the claimed subject matters are cited in respect to claims 1, 2 and 4 above.

Regarding claim 20, all the claimed subject matters are cited in respect to claims 14 and 19 above.

Regarding claim 21, all the claimed subject matters are cited in respect to claims 15 and 19 above.

Regarding claim 22, all the claimed subject matters are cited in respect to claims 16 and 19 above.

Regarding claim 23, all the claimed subject matters are cited in respect to claims 17 and 19 above.

Regarding claim 25, all the claimed subject matters are cited in respect to claims 2 and 19 above.



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Regarding claim 26, all the claimed subject matters are cited in respect to claims 3 and 19 above.

Regarding claim 27, all the claimed subject matters are cited in respect to claims 6 and 19 above.

Regarding claim 28, all the claimed subject matters are cited in respect to claims 10 and 19 above.

Regarding claim 29, all the claimed subject matters are cited in respect to claims 7 and 19 above.

Regarding claim 30, all the claimed subject matters are cited in respect to claims 7 and 19 above.

Regarding claim 31, all the claimed subject matters are cited in respect to claims 1, 2, 7 and 9 above.

Regarding claim 32, all the claimed subject matters are cited in respect to claims 17 and 31 above.

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Regarding claim 33, all the claimed subject matters are cited in respect to claims 17 and 32 above.

Regarding claim 35, all the claimed subject matters are cited in respect to claims 29 and 31 above.

Regarding claim 36, all the claimed subject matters are cited in respect to claims 1, 2 and 35 above.

Regarding claim 37, all the claimed subject matters are cited in respect to claims 7 and 31 above.

Regarding claim 38, all the claimed subject matters are cited in respect to claims 5 and 37 above.

Regarding claim 39, all the claimed subject matters are cited in respect to claims 2 and 31 above.

Regarding claim 40, all the claimed subject matters are cited in respect to claims 3 and 31 above.

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Regarding claim 41, all the claimed subject matters are cited in respect to claims 4 and 31 above.

Regarding claim 42, all the claimed subject matters are cited in respect to claims 5 and 31 above.

Regarding claim 43, all the claimed subject matters are cited in respect to claims 6 and 31 above.

Regarding claim 44, all the claimed subject matters are cited in respect to claims 10 and 31 above.

Regarding claim 45, all the claimed subject matters are cited in respect to claims 13 and 31 above.

Regarding claim 46, all the claimed subject matters are cited in respect to claims 15 and 31 above.

Regarding claim 47, all the claimed subject matters are cited in respect to claims 16 and 31 above.

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Regarding claim 48, all the claimed subject matters are cited in respect to claims 1, 2 and 4 above.

Regarding claim 49, all the claimed subject matters are cited in respect to claims 6 and 48 above.

Regarding claim 50, all the claimed subject matters are cited in respect to claims 10 and 48 above.

Regarding claim 51, all the claimed subject matters are cited in respect to claims 7 and 48 above.

Regarding claim 52, all the claimed subject matters are cited in respect to claims 2 and 48 above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18, 24 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huston et al** [US 5,872,721] in view of **Dungan** [US 6,252,510].

Regarding claim 18, **Huston et al** fails to disclose the solar power connected with the control apparatus to provide power. However, **Huston et al** teaches that the battery charger circuit charges the battery for powering the monitor control system 100 or 300, see Figs. 15, 41A, 41B and 56, col. 4, lines 7-62 and col. 9, lines 58-64. **Dungan** suggests that a wireless toxic gas monitoring system having one or more monitoring devices. Each device 14 may be solar 7 or battery 9 powered or powered by any other sources of power chosen with sound engineering judgment, see Figs. 1, 2 and 5, col. 3, lines 31-37 and col. 6, lines 10-18. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the solar power of **Dungan** for the battery power of **Huston et al** in order to prevent of losing electrical power due to dead battery and to minimize of power maintenance or replacement.

Regarding claim 24, all the claimed subject matters are discussed between **Huston et al** and **Dungan** in respect to claims 18 and 19 above.

Regarding claim 34, all the claimed subject matters are discussed between **Huston et al** and **Dungan** in respect to claims 18 and 31 above.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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**Grace et al** discloses a gas sensing instrument providing programmable control of the operating temperatures of any array of gas sensors of the detection of target gases in the air. [US 4,847,783]

**Clifford** discloses a gas detecting system for determining the presence and concentration of a number of selected toxic or reducing gases in an atmosphere. [US 4,542,640]

**Stalder et al** discloses a single channel multiplexed non-dispersive optical gas monitoring system combined with an electro-chemical oxygen cell. [US 3,860,818]

6. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long, sweeping horizontal line extending to the right.

**Van Trieu**  
**Primary Examiner**  
**Date: 9/16/04**